

ODIN PETROIL S.A. EN REESTRUCTURACIÓN  
 CR 57A 30-399 SEC TRONCAL DEL CARIBE - SAN FRANCISCO.  
 470001, SANTA MARTA  
 Colombia



Attention of : Mr. J. Martinez

## Analysis Report

Report number : **15300/00011096.6.1/L/22** Submitted date : 2022-09-06  
 Main Object : Odín Petroil / Análisis Laboratorio Sample submitted at : Saybolt Colombia - Cartagena  
 Report Date : 2022-09-07 Date received : 2022-09-06  
 Date of issue : 2022-09-07 Date completed : 2022-09-07  
 Sample object : Muestra 06-09-22 Sample number : 13670696  
 Sample type : Submitted  
 Sample submitted as : Petroil 300 VLSFO ISO 8217/2017  
 Marked : Petroil 300 VLSFO ISO 8217/2017

NAME	METHOD	UNIT	RESULT
API Gravity at 60 °F	ASTM D 1298-12b (2017)	°API	29.2
Density at 15 °C	ASTM D 1298-12b (2017)	kg/L	880.0
Relative Density at 60/60 °F	ASTM D 1298-12b (2017)	-	0.8805
Total Sulfur Content	ASTM D 4294-21	% m/m	0.352
Kinematic Viscosity at 50 °C	ASTM D 445-21e1	mm <sup>2</sup> /s	5.675
Accelerated Total Sediment by Hot Filtration - Proc. B	IP 390/11(2017)	mass %	0.03
Water by Distillation	ASTM D 95-13(18)	% v/v	0.1
CCAI	ISO 8217 (Annex F):2017	-	811.6
Flash Point (PM) - Procedure B	ASTM D 93-20	°C	72.0
Pour Point	ASTM D 97-17b	°C	<-33
Ash Content	ASTM D 482-19	% m/m	0.027
Compatibility	ASTM D 4740-20	-	1
Vanadium (V) - Procedure B	ASTM D 5863-00a (2016)	mg/kg	18
Aluminum (Al) - Method B	ASTM D 5184-12(2017)	mg/kg	15
Silicon (Si) - Method B	ASTM D 5184-12(2017)	mg/kg	19
Aluminum plus Silicon	ASTM D 5184-12(2017)	mg/kg	34
Heat of Combustion	ASTM D 4868-17		
Gross Heat of Combustion		Btu/lb	19315
Net Heat of Combustion		Btu/lb	18157

Signed by: Ronald Vargas Barrios - Laboratory Supervisor I  
 Issued by: Saybolt de Colombia SAS  
 Place and date of issue: Cartagena - 2022-09-07

All results in this report refer to the sample(s) tested as taken or submitted like specified in this Analysis report. Uncertainties, available on request, apply in the evaluation of the test results. All tests are conducted according to the latest version of the methods, unless another version is specifically indicated. Where available and for convenience purposes, the tested sample has been checked for compliance with supplied specifications, without accepting any liability for the supplied information. In case of dispute or concern, we refer to the interpretation of test results as defined in ASTM D3244, IP 367, ISO 4259 or GOST 33701. This report shall not be partially copied and reproduced without the written permission of the laboratory.